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Observations on the occurrence and behaviour of the Crimson Fruitcrow *Haematoderus militaris* in Central Amazonia

by Richard O. Bierregaard, Jr, Douglas F. Stotz,
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Received 8 October 1986

As is the case with many of the species that inhabit the canopy of tropical forests, the biology of the Crimson Fruitcrow *Haematoderus militaris* is so poorly known that any observations of the species in the wild significantly increase our understanding of its ecology and distribution. Snow (1982) states that the species is "virtually unknown in life". In the course of 5 years of ornithological field work in the Agricultural Development District some 50-75 km north of Manaus, Amazonas, Brazil, we have made the following observations of Crimson Fruitcrows.

The area in which the bird has been observed is still for the most part virgin forest on nutrient-poor yellow latosols, typical of the terra firma forests accompanying the major river courses throughout the Amazon Basin. Average canopy height is c. 35 m with emergents upwards of 45 m. The canopy is fairly continuous and regular in surface contour (for further description of the forest, see *Suppl. Acta Amazonica* 12(3), 1982).

Most of our sightings of *H. militaris* have been made while conducting canopy surveys from a 42 m observation tower (Fig. 1) in the middle of virgin forest c. 50 km north of Manaus (see Bierregaard 1983). Additional observations were made from a 20 m high platform overlooking both virgin forest and deforested areas on the Fazenda Esteio, a cattle ranch being developed c. 65 km north of Manaus. Other observations have been made from the ground in the course of field work here and on 2 other nearby cattle ranches, Fazenda Dimona and Fazenda Porto Alegre.

Previously known only from the eastern Amazon Basin (Meyer de Schauensee 1970), the species seems to be fairly widely distributed throughout the Agricultural District as it has been reported in all the above

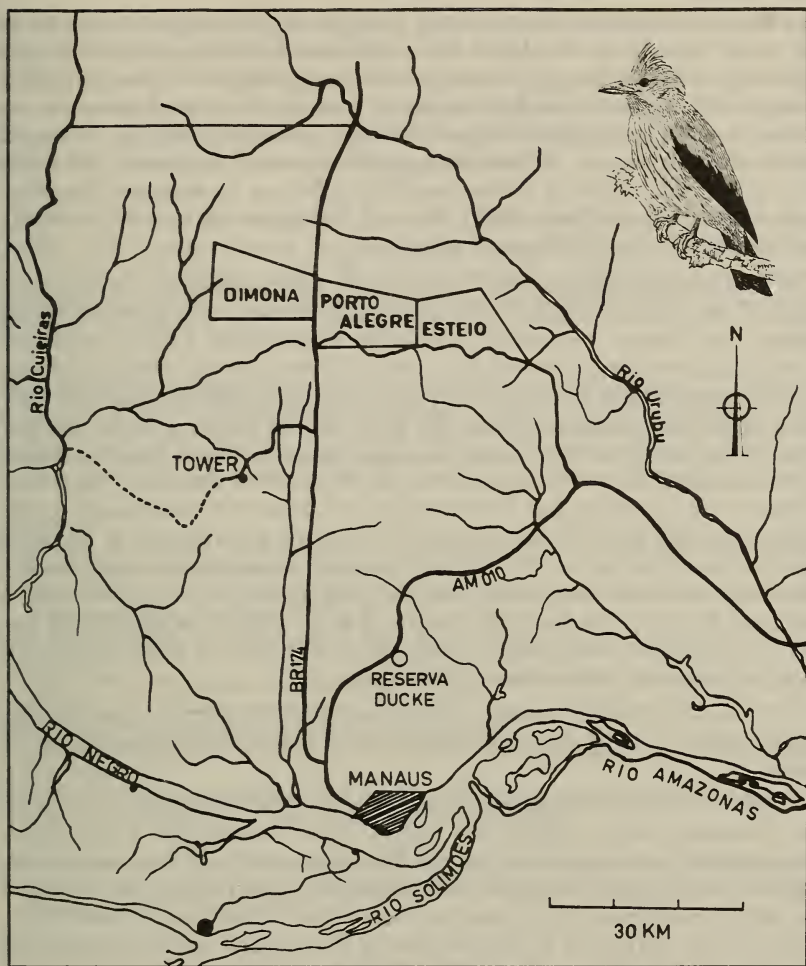


Figure 1. The study areas north of Manaus, Amazonas, Brazil ($3^{\circ}6'S$, $60^{\circ}W$), where observations of the Crimson Fruitcrow *Haematoderis militaris* were made. The drawing of the fruitcrow has generously been provided by Martin Woodcock.

areas where the banding teams of the WWF/INPA project have worked. Although Willis (1977) did not report the species from Reserva Ducke, B. Magnusson saw one individual from a recently constructed meteorological tower extending above the canopy. Other avifaunal differences between the Agricultural District and Reserva Ducke have been noted by Stotz & Bierregaard (in prep.).

Following the first sighting in July 1979 (the Manaus distributional record in Snow 1982), the bird has been seen on c. 25% of our census days at the tower, where 2 emergent trees provided favourite perches, usually a shaded branch with a wide view of the surrounding canopy, on which the

bird would remain inactive for long periods. All but one observations at the tower have been of solitary birds and most have been of adult males. Sightings of birds foraging through the canopy elsewhere have included groups of 3-4. Active males remain at a perch for several minutes, on occasion calling repeatedly before moving to another perch up to several hundred metres away. When moving about around the tower, the birds will repeatedly return to a few specific perches, as do some of the other large male cotingids (Snow 1982). Normal flight between canopy perches is undulating like that of large woodpeckers.

In July and November 1983, flight displays were observed. In July, on a bright, sunny day, a single bird in adult male plumage was observed flying around the tower, returning frequently to perch in a large emergent Lecythidaceae near the tower. At c. 08:00 it flew from this perch, climbing at a steep angle with a very stereotyped, rapid and shallow wing beat with little apparent upstroke above the level of the body, a flight pattern reminiscent an American Kestrel's *Falco sparverius* food begging flight. The bird climbed in a wide spiral to c. 20-30 m above the canopy and then abruptly set its wings out horizontally and began a slow descent to the emergent from which it had flown. The display was repeated c. 10 times prior to our departure at 09:00. The November observations were virtually identical, with the exception that the display flight was made over a deforested area at the Fazenda Esteio; as at the tower, an adult male was seen on the same dead snag on each of several days of observation. No vocalizations were heard during the displays.

One bird in female plumage, when observed from directly beneath, was heard to snap its wings together sharply twice immediately upon leaving its perch.

Fruitcrows have been heard vocalizing on the WWF/INPA reserves on the Fazendas Porto Alegre and Esteio. The vocalization was a short, low-pitched hoot reminiscent of the Flammulated Owl *Otus flammeolus*, repeated at irregular intervals of several seconds. The call was recorded and has been deposited at the Library of Natural Sound at Cornell University, Ithaca, New York, and at the Instituto de Bioacustica at the University of Campinas, in Campinas, São Paulo, Brazil.

While observing a pair of Crimson Fruitcrows, D.F.S. observed the female glean a 3 cm Orthopteran from the branch on which she was perched. While being manipulated, the insect escaped, but the female swooped down c. 3 m and caught it again. On another occasion, 2 males were witnessed successfully sallying from the canopy for large orthopterans. The only other known food items for the species are from stomach contents, all of them invertebrates: Novaes (1978) reported a Buprestid beetle (*Coleoptera*) 3.5 cm long, and Haverschmidt (1977) also reported *Coleoptera*. The aerial recovery of the escaped insect and the sallying bouts suggest that invertebrate prey is a not unusual item of diet.

Two individuals have been observed in an unusual plumage. In the first, patches of crimson were superimposed on a grey background on the ventral surface, while on the second, the breast and belly were crimson

with patches of grey, suggesting that there may be an as yet undescribed immature plumage for this species.

The frequency of sightings of the Crimson Fruitcrow suggests that it is less common than the Pompadour Cotinga *Xipholena punicea*, which was seen on c. 90% of the census days, but is significantly more common than either the Spangled Cotinga *Cotinga cayana* or the Purple-breasted Cotinga *C. cotinga*.

Snow (1982: 153) suggests that the Capuchinbird *Perissocephalus tricolor*, may competitively exclude other large fruitcrows. In the study area north of Manaus, both *P. tricolor* and *H. militaris* are, for large cotingids, relatively common, suggesting that in suitable habitat of several hundred km² these 2 species are not exclusive.

Acknowledgements: This study was supported by the World Wildlife Fund – U.S. (WWF), the Instituto Nacional de Pesquisas da Amazonia (INPA), the Instituto Brasileiro de Desenvolvimento Florestal (IBDF), and a grant from the National Park Service, Cooperative Agreement CX-0001-9-0041. It represents publication number 20 in the Minimum Critical Size of Ecosystems project (Dinamica Biologica de Fragmentos Florestais) Technical Series.

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Additions and corrections to the avifauna of Zaïre (1)

by M. Louette

Received 1 November 1986

The following comments are mainly due to reidentifications of specimens in Koninklijk Museum voor Midden-Afrika (KMMA).

Falco amurensis

It is noteworthy that there are in fact 4 specimen records of this migrant from Zaïre (all in KMMA): Lokoma (Equateur), 23 January 1949; Bambesa (Uele), 4 February 1938; Butembo (Kivu), 12 October 1957; and Kinda (Shaba), 20 October 1914. The last 2 mentioned are reidentifications.